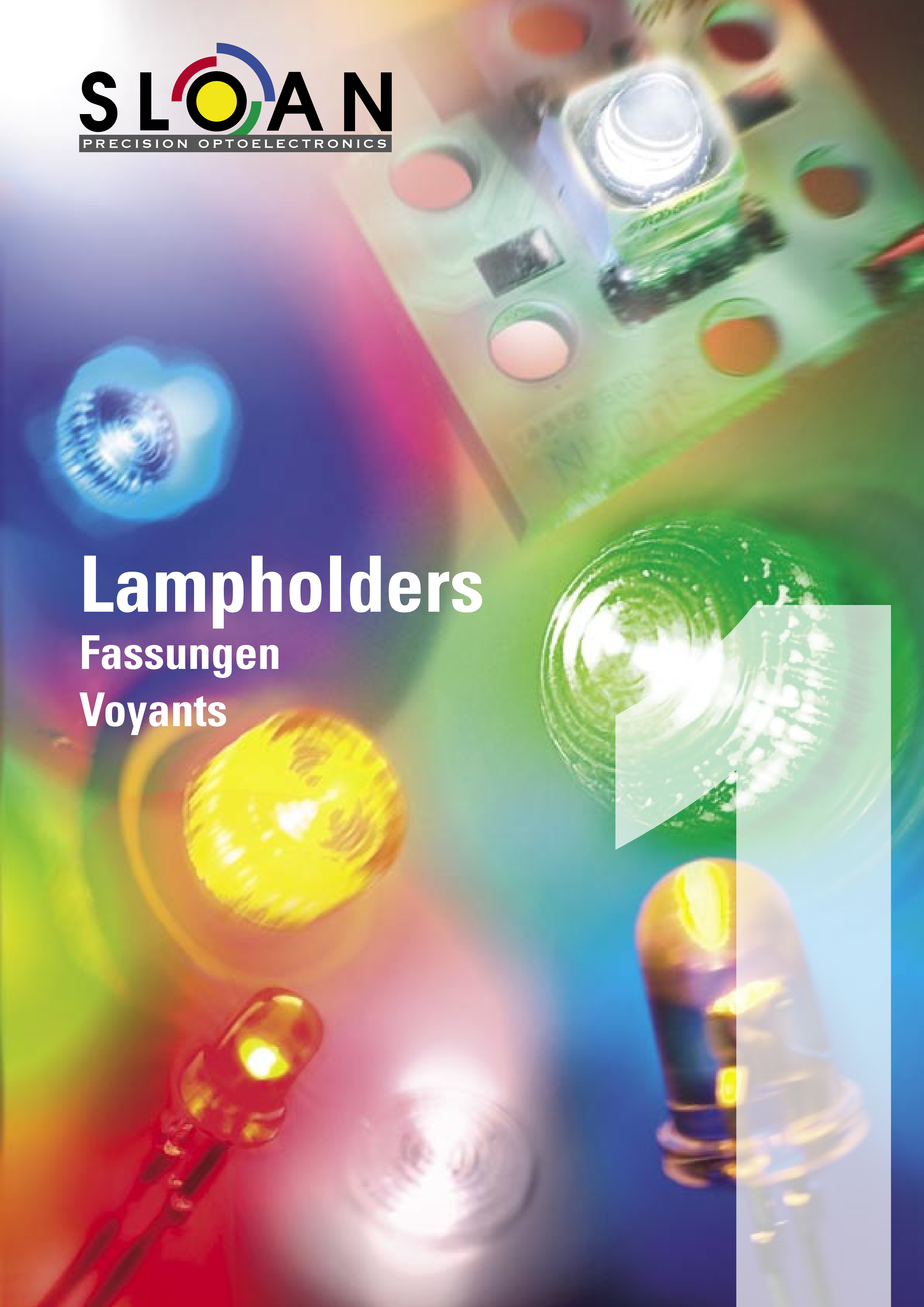
SLOAN
PRECISION OPTOELECTRONICS



Lampholders

Fassungen

Voyants

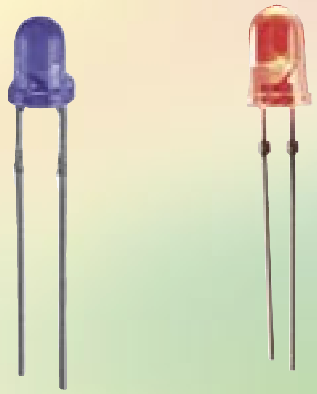
1


SLOAN

Pages
Seiten
Pages

Lampholders
Fassungen
Voyants

Pages Seiten Pages	# Lightsources Lichtquellen Sources lumineuses
27 – 28	**LED's** **LED's** **LED's**
30 – 35	**LED's based** **LED's gesockelt** **LED's avec socle**





Flat indicator lights

Rotation-proof
for LED, not exchangeable
Option: **waterproof**

Flach-Leuchte

Verdrehsicher
für LED, nicht auswechselbar
Option: **wasserdicht**

Voyants lumineux plats

Anti-rotation
pour LED, non remplaçable
Option: **étanche**

343 344 348

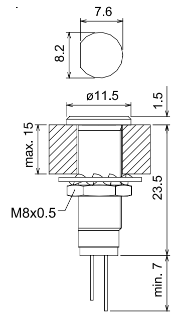


Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

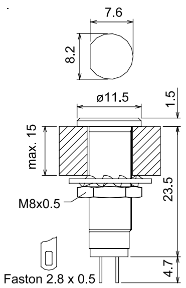
Type / Typ / Type

Terminals / Anschlüsse / Raccords

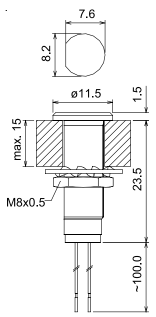
343



344



348



Stranded wire
100 mm
Other lengths on request
Andere Längen auf Anfrage
Autres longueurs sur demande

Body / Körper / Corps

Protection / Schutzart / Protection	
0	Not waterproof / Nicht wasserdicht / Non étanche
4	IP 64
7	IP 67
8	IP 68
M	IP 68 military version

Surface / Oberfläche / Surface (343, 344)

Code	
B	Blackened / geschwärzt / Noircie
S	Bright nickel plated / Glanzvernickelt / Nickelée brillante

Surface / Oberfläche / Surface (348)

Code	
1	Blackened / geschwärzt / Noircie; Stranded wire / Litze / Fil multi-brins
2	Bright nickel plated / Glanzvernickelt / Nickelée brillante; Stranded wire / Litze / Fil multi-brins

Accessories / Zubehör / Accessoires

1

Lens / Linse / Lentille

with / mit / avec FRESNEL	Colour / Farbe / Couleurs
A1	Amber / Orange / Orange
B1	Blue / Blau / Bleu
C1	Clear / Klar / Clair
G1	Green / Grün / Vert
R1	Red / Rot / Rouge
W3	White / Weiss / Blanc

Light source / Lichtquelle / Source lum.

LED 5 mm

Code	Luminous intensity	Colour
Y54U	7000 mcd	Yellow / Gelb / Jaune
Y52U	3000 mcd	
Y50U	2000 mcd	
B91G	6700 mcd	Blue / Blau / Bleu
B21G	2120 mcd	
B61G	800 mcd	
G81N	16000 mcd	Green / Grün / Vert
G61N	7200 mcd	
G71N	2760 mcd	
R54U	7000 mcd	Red / Rot / Rouge
R52U	4000 mcd	
R50U	3000 mcd	
W54N	18500 mcd	White / Weiss / Blanc
W52N	2500 mcd	
W50N	690 mcd	

see data-sheet Page 27
siehe Datenblatt Seite 27
voir feuille technique
sur la page 27

Resistor / Widerstand / Résistance

Code	V	mA
0	without / ohne / sans	
A	5	20
B	12	20
D	24	20
E	28	20

Specifications are subject to change without notice
Änderungen die dem technischen Fortschritt dienen, sind vorbehalten
Réserve de modifications de toutes les données techniques

3	4				1			

Flat indicator lights
Extra flat execution
for close assembly
LED not exchangeable

Flach-Leuchte
Extraflache Ausführung
für enge Reihenmontage
LED nicht auswechselbar

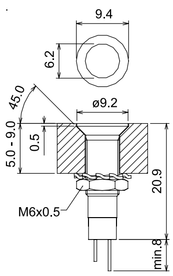
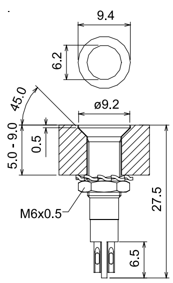
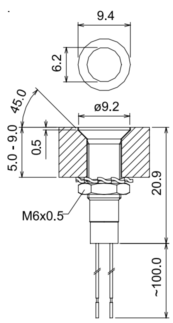
Voyants lumineux plats
Exécution extra-plat
pour montage rapproché
LED non remplaçable

193 194 198



Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

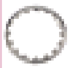
Type / Typ / Type — Terminals / Anschlüsse / Raccords

Type	Terminals / Anschlüsse / Raccords
193	
194	
198	 **Stranded wire** **100 mm** Other lengths on request / Andere Längen auf Anfrage / Autres longueurs sur demande

Body / Körper / Corps

Surface / Oberfläche / Surface		Nature / Beschaffenheit / Nature	
B	Blackened / geschwärzt / Noircie	**0**	Not waterproof / Nicht wasserdicht / Non étanche
S	Bright nickel plated / Glanzvernickelt / Nickelée brillante		
		Wire / Draht / Fil	
		1	Stranded wire / Litze / Fil multi-brins

Accessories / Zubehör / Accessoires

Code	
1	

Lens / Linse / Lentille

Style / Form / Forme	with/mit/avec FRESNEL	Colour / Farbe / Couleurs
8	**A1**	Amber / Orange / Orange
	B1	Blue / Blau / Bleu
	C1	Clear / Klar / Clair
	G1	Green / Grün / Vert
	R1	Red / Rot / Rouge
	W3	White / Weiss / Blanc

Light source / Lichtquelle / Source lum. — LED 3 mm

Code	Intensity	Colour
Y33U	3200 mcd	Yellow / Gelb / Jaune
Y32U	2200 mcd	
Y30U	1200 mcd	
B71G	3200 mcd	Blue / Blau / Bleu
B41G	1160 mcd	
B51G	700 mcd	
G41N	11000 mcd	Green / Grün / Vert
G51N	5500 mcd	
G31N	3220 mcd	
R33U	3200 mcd	Red / Rot / Rouge
R32U	1600 mcd	
R30U	1000 mcd	
W33N	4600 mcd	White / Weiss / Blanc
W35N	3100 mcd	
W30N	1100 mcd	

see data-sheet Page 28
siehe Datenblatt Seite 28
voir feuille technique
sur la page 28

Resistor / Widerstand / Résistance

Code	V	mA
0	without / ohne / sans	
A	5	20
B	12	20
D	24	20
E	28	20

1	9				1	8			

Specifications are subject to change without notice · Änderungen die dem technischen Fortschritt dienen, sind vorbehalten · Réserve de modifications de toutes les données techniques

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LED indicator
waterproof IP 67

LED Signalleuchte
Wasserdicht IP 67

Lampe de signalisation LED
étanche a l'eau IP 67

962

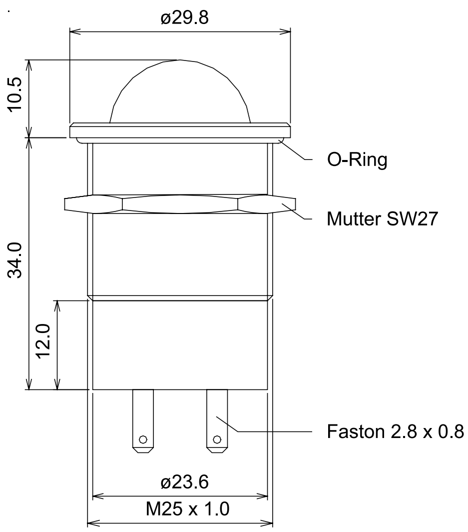


963

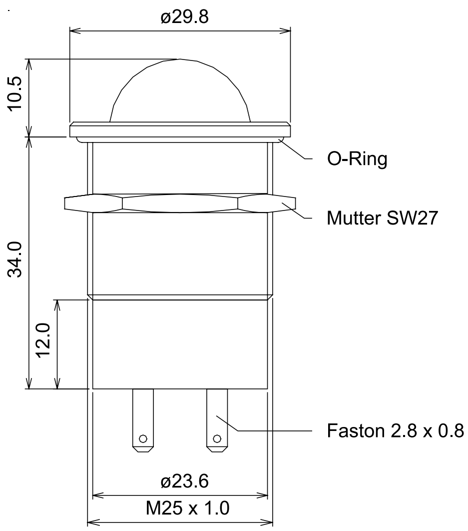


Type / Typ / Type	Voltage Spannung Tension		Body Körper Corps		Terminals Anschlüsse Raccords		Colour Farbe Couleurs	
962	**B**	= 12 VDC	**S**	silver anodized aluminium casing silber eloxiertes Aluminiumgehäuse argent anodisé boîtier en alu	**F**	Faston 2,8 x 0,8 mm	**Y**	Yellow Gelb Jaune
	D	= 24 VDC	**B**	black anodized aluminium casing schwarz eloxiertes Aluminiumgehäuse noir anodisé boîtier en alu	**K**	cable 1,2 meters long Kabel 1,2 m lang cable 1,2 metre long	**B**	Blue Blau Bleu
							G	Green Grün Vert
							R	Red Rot Rouge
							W	White Weiss Blanc
963	**X**	= 115 VAC						
	Z	= 230 VAC						

962



963



Order-code
Bestell-code
Code de commande

9	6					

Indicator lights
LED not exchangeable

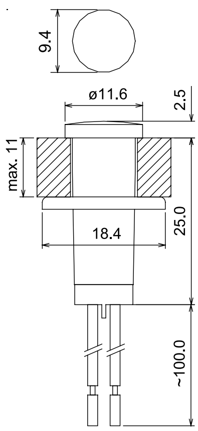
Signalleuchten
LED nicht auswechselbar

Voyants lumineux
LED non remplaçable



Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

Type / Typ / Type		Body / Körper / Corps	
Terminals Anschlüsse Raccords		Surface Oberfläche Surface	
200	insulated stranded wires Isolierte Litzen Fils multi-brins	**1**	Polycarbonate With stranded wire Mit Litze Avec fil multi-brins **Standard 100 mm** Other lengths on request Andere Längen auf Anfrage Autres longueurs sur demande



Accessories / Zubehör / Accessoires			
1	Retainer Klemmscheibe Rondelle de serrage 	**1**	Decorative washer Dekorationsscheibe Rondelle décorative nickel plated vernickelt nickelé 
		2	Decorative washer Dekorationsscheibe Rondelle décorative black schwarz noir 

Cap / Farbkappe / Cabochon		
Style Form Forme	with / mit / avec FRESNEL	Colour Farbe Couleurs
0 Standard	**A1**	Amber Orange Orange
	B1	Blue Blau Bleu
	C1	Clear Klar Clair
	G1	Green Grün Vert
	R1	Red Rot Rouge

Light source / Lichtquelle / Source lum. LED 5 mm	
Y54U 7000 mcd	Yellow Gelb Jaune
Y52U 3000 mcd	
Y50U 2000 mcd	
B91G 6700 mcd	Blue Blau Bleu
B21G 2120mcd	
B61G 800 mcd	
G81N 16000 mcd	Green Grün Vert
G61N 7200 mcd	
G71N 2760 mcd	
R54U 7000 mcd	Red Rot Rouge
R52U 4000 mcd	
R50U 3000 mcd	
W54N 18500 mcd	White Weiss Blanc
W52N 2500 mcd	
W50N 690 mcd	

see data-sheet Page 27
siehe Datenblatt Seite 27
voir feuille technique sur la page 27

Resistor / Widerstand / Résistance		
Code	V	mA
0	without ohne sans	
A	5	20
B	12	20
D	24	20
E	28	20

2	0	0	1	1		0			

SLOAN PRECISION OPTOELECTRONICS

Indicator lights with reflector

Rotation-proof
LED not exchangeable
Option: **waterproof**

Signalleuchten mit Reflektor

Verdrehsicher
LED nicht auswechselbar
Option: **wasserdicht**

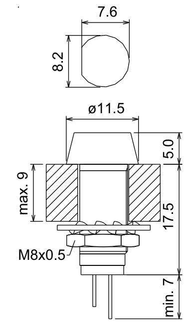
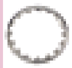
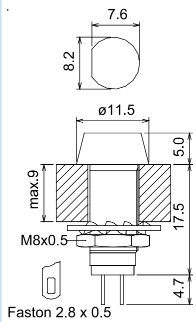
Voyants lumineux avec réflecteur

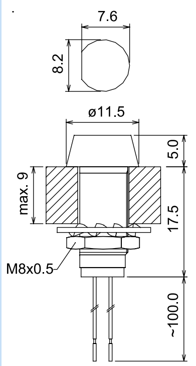
Anti-rotation
LED non remplaçable
Option: **étanche**

333 **334** **338**



Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

Type / Typ / Type Terminals / Anschlüsse / Raccords	Body / Körper / Corps – Protection / Schutzart / Protection		Body / Körper / Corps – Surface / Oberfläche / Surface		Accessories / Zubehör / Accessoires	Light source / Lichtquelle / Source lum. (LED 5 mm)		Resistor / Widerstand / Résistance – Code	V	mA
333 	**0**	Not waterproof / Nicht wasserdicht / Non étanche	**B**	Blackened / geschwärzt / Noircie	**1** 	**Y54U** 7000 mcd	Yellow / Gelb / Jaune	**0**	without / ohne / sans	
	4	IP 64	**S**	Bright nickel plated / Glanzvernickelt / Nickelée brillante		**Y52U** 3000 mcd		**A**	5	20
	7	IP 67				**Y50U** 2000 mcd		**B**	12	20
	8	IP 68				**B91G** 6700 mcd	Blue / Blau / Bleu	**D**	24	20
	M	IP 68 military Version Type 333				**B21G** 2120 mcd		**E**	28	20
						B61G 800 mcd				
334 						**G81N** 16000 mcd	Green / Grün / Vert			
						G61N 7200 mcd				
						G71N 2760 mcd				
						R54U 7000 mcd	Red / Rot / Rouge			
						R52U 4000 mcd				
						R50U 3000 mcd				

Type / Typ / Type	Protection		Surface / Oberfläche / Surface		Lenght / Länge / Longueur (cm)		Light source	
338 	**0**	Not waterproof / Nicht wasserdicht / Non étanche					**W54N** 18500 mcd	White / Weiss / Blanc
	4	IP 64	**1**	Blackened / geschwärzt / Noircie – Stranded wire / Litze / Fil multi-brins	**010**	Standard cm (100 mm)	**W52N** 2500 mcd	
	7	IP 67			**020**	cm (200 mm)	**W50N** 690 mcd	
			2	Bright nickel plated / Glanzvernickelt / Nickelée brillante – Stranded wire / Litze / Fil multi-brins	**025**	cm (250 mm)	see data-sheet Page 27 / siehe Datenblatt Seite 27 / voir feuille technique sur la page 27	

3	3				1			

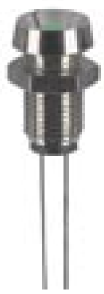
SLOAN PRECISION OPTOELECTRONICS

Indicator lights with reflector
LED not exchangeable

Signalleuchten mit Reflektor
LED nicht auswechselbar

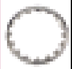
Voyants lumineux avec réflecteur
LED non remplaçable

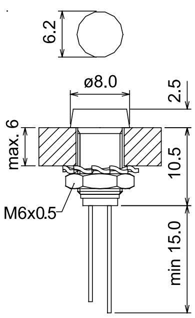
13C

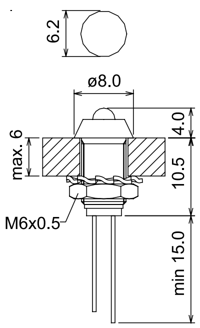


14C



Type / Typ / Type (Terminals / Anschlüsse / Raccords)		Body / Körper / Corps: Protection / Schutzart / Protection	Body / Körper / Corps: Surface / Oberfläche / Surface		Accessories / Zubehör / Accessoires		Light source / Lichtquelle / Source lum. (LED 3 mm)	
13C	LED inside reflector LED innerhalb Reflektor LED à l'intérieur du réflecteur	0	B	Blackened geschwärzt Noircie	1		R3010	Red Rot Rouge
			S	Bright nickel plated Glanzvernickelt Nickelée brillante			G3010	Green Grün Vert
							Y3010	Yellow Gelb Jaune
14C	LED protruding LED vorstehend LED dépassant réflecteur						A3010	Amber Orange Orange





Spezifications / Spezifikationen / Spécifications
LED's / Leuchtdioden / Diodes lumineuses

Electro-optical characteristics Ta = 25°C

Colour diffused	Peak wave length λp Typ. (nm)	Operating (Storage) Temperatur (°C)	Viewing Angle	Typ. mcd	Forward voltage Typ. (V)	Forward voltage Max. (V)
R3010	700	- 40 … +85 (+100)	40°	8.0	2.2	2.6
G3010	568		40°	35	2.2	2.6
Y3010	585		40°	40	2.1	2.6
A3010	635		40°	30	2.0	2.6

1		C	0		1	

Waterproof indicator lights with reflector
LED not exchangeable

Wasserdichte Signalleuchten mit Reflektor
LED nicht auswechselbar

Voyants lumineux avec réflecteur, étanches
LED non remplaçable

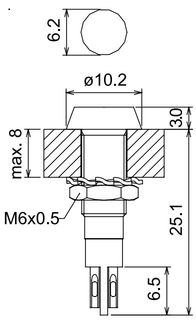
134	135	138
		

Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

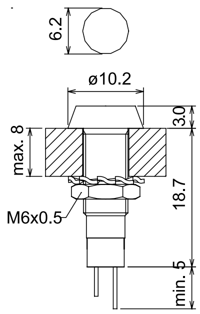
Type / Typ / Type
Terminals / Anschlüsse / Raccords

Code	Description
134	LED inside reflector / LED innerhalb Reflektor / LED à l'intérieur du réflecteur
135	
138	

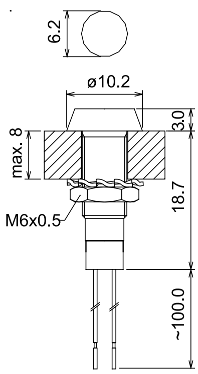
134:



135:



138:



Body / Körper / Corps

Protection / Schutzart / Protection

Code	Protection
4	IP 64
7	IP 67
8	IP 68

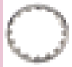
Surface / Oberfläche / Surface (134, 135)

Code	Surface
B	Blackened / geschwärzt / Noircie
S	Bright nickel plated / Glanzvernickelt / Nickelée brillante

Surface / Oberfläche / Surface (138)

Code	Surface
1	Blackened / geschwärzt / Noircie; Stranded wire / Litze / Fil multi-brins
2	Bright nickel plated / Glanzvernickelt / Nickelée brillante; Stranded wire / Litze / Fil multi-brins

Accessories / Zubehör / Accessoires

Code	
1	

Decorativ nut / Ziermutter / Ecrou decoratif

Code	
0	front mounting

Lenght / Länge / Longueur (cm) (138)

Code	
010	Standard cm (100 mm)
	Ohter lengths on request
	Andere Längen auf Anfrage
	Autres longueurs sur demande

Light source / Lichtquelle / Source lum.
LED 3 mm

Code	Intensity	Colour
Y33U	3200 mcd	Yellow / Gelb / Jaune
Y32U	2200 mcd	
Y30U	1200 mcd	
B71G	3200 mcd	Blue / Blau / Bleu
B41G	1160 mcd	
B51G	700 mcd	
G41N	11000 mcd	Green / Grün / Vert
G51N	5500 mcd	
G31N	3220 mcd	
R33U	3200 mcd	Red / Rot / Rouge
R32U	1600 mcd	
R30U	1000 mcd	
W33N	4600 mcd	White / Weiss / Blanc
W35N	3100 mcd	
W30N	1100 mcd	

see data-sheet Page 28
siehe Datenblatt Seite 28
voir feuille technique sur la page 28

Resistor / Widerstand / Résistance

Code	V	mA
0	without / ohne / sans	
A	5	20
B	12	20
D	24	20
E	28	20

1	3				1			

Specifications are subject to change without notice
Änderungen die dem technischen Fortschritt dienen, sind vorbehalten
Réserve de modifications de toutes les données techniques

Waterproof indicator lights

rear mounting
LED not exchangeable
Rotation-proof

Wasserdichte Signalleuchten

von hinten montierbar
LED nicht auswechselbar
Verdrehsicher

Voyants lumineux avec réflecteur

montage par l'arrière
LED non remplaçable
Anti-rotation

133R | **134R** | **138R**



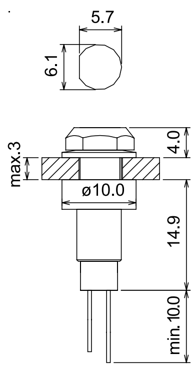


Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

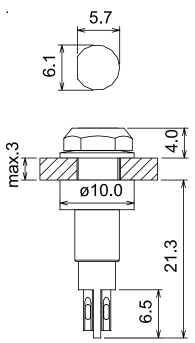
Type / Typ / Type

LED inside reflector
LED innerhalb Reflektor
LED à intérieur du reflecteur

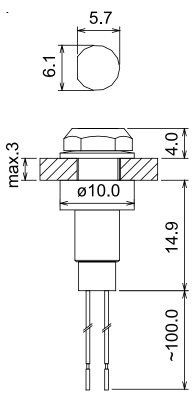
133R



134R



138R



Body / Körper / Corps

Protection / Schutzart / Protection	
4	IP 64
7	IP 67
8	IP 68

Surface / Oberfläche / Surface (133R, 134R)

Code	
U	Blackened / geschwärzt / Noircie
V	Bright nickel plated / Glanzvernickelt / Nickelée brillante

Surface / Oberfläche / Surface (138R)

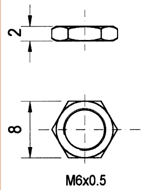
Code	
1	Blackened / geschwärzt / Noircie; Stranded wire / Litze / Fil multibrins
2	Bright nickel plated / Glanzvernickelt / Nickelée brillante; Stranded wire / Litze / Fil multibrins

Accessories / Zubehör / Accessoires

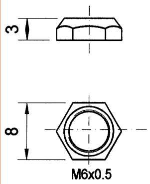
1 

Nut / Mutter / Ecrou

H with hex nut / mit 6kant Mutter / avec écrou 6-pans



N with decorative nut / mit Ziermutter / avec écrou décoratif



Lenght / Länge / Longueur

010 Standard cm (100 mm)

Ohter lengths on request
Andere Längen auf Anfrage
Autres longueurs sur demande

Light source / Lichtquelle / Source lum.

LED 3 mm

Code	Intensity	Colour
Y33U	3200 mcd	Yellow / Gelb / Jaune
Y32U	2200 mcd	
Y30U	1200 mcd	
B71G	3200 mcd	Blue / Blau / Bleu
B41G	1160 mcd	
B51G	700 mcd	
G41N	11000 mcd	Green / Grün / Vert
G51N	5500 mcd	
G31N	3220 mcd	
R33U	7000 mcd	Red / Rot / Rouge
R32U	4000 mcd	
R30U	3000 mcd	
W33N	4600 mcd	White / Weiss / Blanc
W35N	3100 mcd	
W30N	1100 mcd	

see data-sheet Page 28
siehe Datenblatt Seite 28
voir feuille technique sur la page 28

Resistor / Widerstand / Résistance

Code	V	mA
0	without / ohne / sans	
A	5	20
B	12	20
D	24	20
E	28	20

1	3		R			1				

SLOAN PRECISION OPTOELECTRONICS

Indicator lights with reflector

Rotation-proof
LED not exchangeable
Option: **waterproof**

Signalleuchten mit Reflektor

Verdrehsicher
LED nicht auswechselbar
Option: **wasserdicht**

Voyants lumineux avec réflecteur

Anti-rotation
LED non remplaçable
Option: **étanche**

353



354

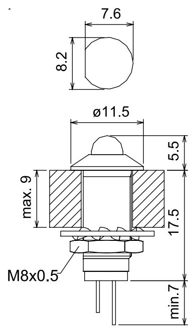
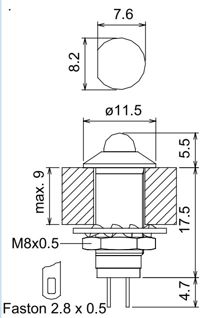
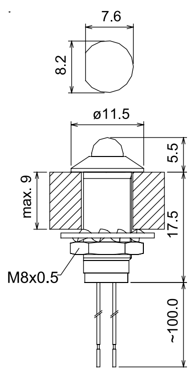


358



Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

Type / Typ / Type – Terminals / Anschlüsse / Raccords

Type	Terminals / Anschlüsse / Raccords
353	
354	
358	

Body / Körper / Corps (353, 354)

Protection / Schutzart / Protection		Surface / Oberfläche / Surface	
0	Not waterproof / Nicht wasserdicht / Non étanche	**B**	Blackened / geschwärzt / Noircie
4	IP 64	**S**	Bright nickel plated / Glanzvernickelt / Nickelée brillante
7	IP 67		
8	IP 68		

Body / Körper / Corps (358)

Surface / Oberfläche / Surface	
1	Blackened / geschwärzt / Noircie Stranded wire / Litze / Fil multi-brins
2	Bright nickel plated / Glanzvernickelt / Nickelée brillante Stranded wire / Litze / Fil multi-brins

Accessories / Zubehör / Accessoires

Code	
1	(lock washer)

Lenght / Länge / Longueur (cm) (358)

Code	
010	Standard cm (100 mm)
020	Options: cm (200 mm)
025	cm (250 mm)

Light source / Lichtquelle / Source lum. – LED 5 mm

Code	Intensity	Colour
Y54U	7000 mcd	Yellow / Gelb / Jaune
Y52U	3000 mcd	
Y50U	2000 mcd	
B91G	6700 mcd	Blue / Blau / Bleu
B21G	2120 mcd	
B61G	800 mcd	
G81N	16000 mcd	Green / Grün / Vert
G61N	7200 mcd	
G71N	2760 mcd	
R54U	7000 mcd	Red / Rot / Rouge
R52U	4000 mcd	
R50U	3000 mcd	
W54N	18500 mcd	White / Weiss / Blanc
W52N	2500 mcd	
W50N	690 mcd	

see data-sheet Page 27
siehe Datenblatt Seite 27
voir feuille technique
sur la page 27

Resistor / Widerstand / Résistance

Code	V	mA
0	without / ohne / sans	
A	5	20
B	12	20
D	24	20
E	28	20

3	**5**				**1**			

SLOAN PRECISION OPTOELECTRONICS

Waterproof indicator lights with reflector
LED not exchangeable

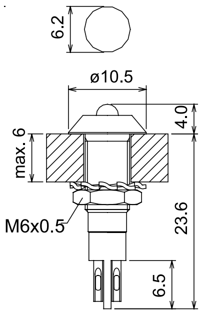
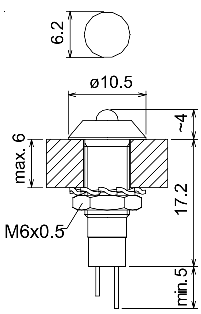
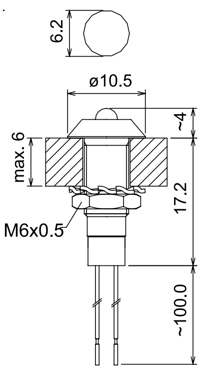
Wasserdichte Signalleuchten mit Reflektor
LED nicht auswechselbar

Voyants lumineux avec réflecteur, étanches
LED non remplaçable

144 145 148



Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

Type / Typ / Type Terminals / Anschlüsse / Raccords	Body / Körper / Corps Protection / Schutzart / Protection	Surface / Oberfläche / Surface	Accessories / Zubehör / Accessoires	Decorativ nut / Ziermutter / Ecrou decoratif	Light source / Lichtquelle / Source lum. LED 3 mm	Resistor / Widerstand / Résistance Code	V	mA
144 	**4** IP 64	**B** Blackened / geschwärzt / Noircie	**1**	**0** front mounting	**Y33U** 3200 mcd – Yellow / Gelb / Jaune	**0**	without / ohne / sans	
	7 IP 67	**S** Bright nickel plated / Glanzvernickelt / Nickelée brillante			**Y32U** 2200 mcd	**A**	5	20
	8 IP 68				**Y30U** 1200 mcd	**B**	12	20
					B71G 3200 mcd – Blue / Blau / Bleu	**D**	24	20
					B41G 1160 mcd	**E**	28	20
145 					**B51G** 700 mcd			
					G41N 11000 mcd – Green / Grün / Vert			
					G51N 5500 mcd			
					G31N 3220 mcd			
					R33U 3200 mcd – Red / Rot / Rouge			
					R32U 1600 mcd			
					R30U 1000 mcd			
148 		Surface / Oberfläche / Surface		Lenght / Länge / Longueur (cm)	**W33N** 4600 mcd – White / Weiss / Blanc			
		1 Blackened / geschwärzt / Noircie; Stranded wire / Litze / Fil multi-brins		**010** Standard cm (100 mm); Ohter lengths on request; Andere Längen auf Anfrage; Autres longueurs sur demande	**W35N** 3100 mcd			
		2 Bright nickel plated / Glanzvernickelt / Nickelée brillante; Stranded wire / Litze / Fil multi-brins			**W30N** 1100 mcd			
					see data-sheet Page 28 / siehe Datenblatt Seite 28 / voir feuille technique sur la page 28			

1	4				1			

Indicator lights with reflector
for close assembly
LED not exchangeable

Signalleuchten mit Reflektor
für enge Reihenmontage
LED nicht auswechselbar

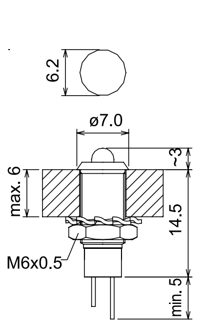
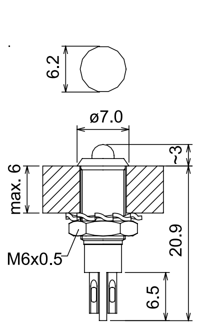
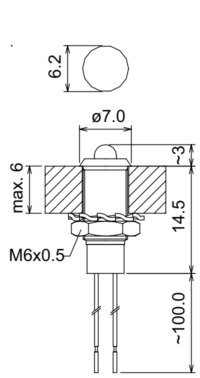
Voyants lumineux avec réflecteur
pour montage rapproché
LED non remplaçable

153	154	158



Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

Type / Typ / Type — Terminals / Anschlüsse / Raccords

Type	Drawing
153	
154	
158	

Body / Körper / Corps

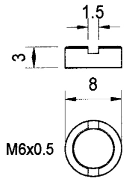
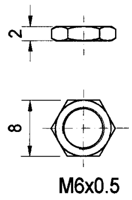
Surface / Oberfläche / Surface (153, 154)

Code	Surface
B	Blackened / geschwärzt / Noircie
S	Bright nickel plated / Glanzvernickelt / Nickelée brillante

Surface / Oberfläche / Surface (158)

Code	Surface
1	Blackened / geschwärzt / Noircie; Stranded wire / Litze / Fil multi-brins
2	Bright nickel plated / Glanzvernickelt / Nickelée brillante; Stranded wire / Litze / Fil multi-brins

Nut / Mutter / Ecrou

Code	Drawing
1	
2	

Accessories / Zubehör / Accessoires

Code	
1	

Lenght / Länge / Longueur cm

Code	Length
010	Standard cm (100 mm)
020	cm (200 mm)
025	cm (250 mm)

Light source / Lichtquelle / Source lum. — LED 3 mm

Code	Intensity	Colour
Y33U	3200 mcd	Yellow / Gelb / Jaune
Y32U	2200 mcd	
Y30U	1200 mcd	
B71G	3200 mcd	Blue / Blau / Bleu
B41G	1160 mcd	
B51G	700 mcd	
G41N	11000 mcd	Green / Grün / Vert
G51N	5500 mcd	
G31N	3220 mcd	
R33U	3200 mcd	Red / Rot / Rouge
R32U	1600 mcd	
R30U	1000 mcd	
W33N	4600 mcd	White / Weiss / Blanc
W35N	3100 mcd	
W30N	1100 mcd	

see data-sheet Page 28
siehe Datenblatt Seite 28
voir feuille technique sur la page 28

Resistor / Widerstand / Résistance

Code	V	mA
0	without / ohne / sans	
A	5	20
B	12	20
D	24	20
E	28	20

1	5				1			

«Jumbo» indicator
waterproof IP65

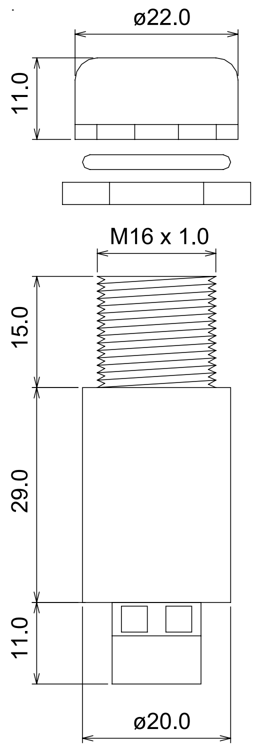
«Jumbo» Leuchte
wasserdicht IP65

Lampe «Jumbo»
étanche IP65

Rearmounting



Package dimensions
All dimensions are in millimeters



Material:
Lens: Polycarbonat (LEXAN)
Body: Thermoplast ABS meet UL94V-0/1,6

Emitted colour	Peak Wave-length λp (nm)	Operat. Temp. (°C)	Stor. Temp. (°C)	Luminous intensity I_V Typ. (mcd)	Forward voltage V_F Typ. (V)	I_F (mA)	Viewing angle (°)	Type / Typ / Type
Blue Blau Bleu	470			2 LED's à 4800 mcd	12 AC/DC	20	60	948BB3B
					24 AC/DC			948BB3D
					48 AC/DC			948BB3J
					115 AC/DC			948BB3X
					230 AC			948BB3Z
Green Grün Vert	565			2 LED's à 800 mcd	12 AC/DC			948GG0B
					24 AC/DC	20	60	948GG0D
					48 AC/DC			948GG0J
					115 AC/DC			948GG0X
					230 AC			948GG0Z
	525			super-bright 2 LED's à 16000 mcd	12 AC/DC			948GG3B
					24 AC/DC			948GG3D
					48 AC/DC			948GG3J
					115 AC/DC			948GG3X
					230 AC			948GG3Z
Red Rot Rouge	660			2 LED's à 3000 mcd	12 AC/DC			948RR0B
					24 AC/DC			948RR0D
		- 30 + 80	- 40 + 100		48 AC/DC	20	60	948RR0J
					115 AC/DC			948RR0X
					230 AC/DC			948RR0Z
White Weiss Blanc	x = 0.31 y = 0.32			super-bright 2 LED's à 9200 mcd	12 AC/DC			948WW3B
					24 AC/DC			948WW3D
					48 AC/DC			948WW3J
					115 AC/DC	20	60	948WW3X
					230 AC			948WW3Z
Yellow Gelb Jaune	585			2 LED's à 250 mcd	12 AC/DC			948YY0B
					24 AC/DC			948YY0D
					48 AC/DC			948YY0J
					115 AC/DC			948YY0X
					230 AC/DC	20	60	948YY0Z
	590			super-bright 2 LED's à 8700 mcd	12 AC/DC			948YY3B
					24 AC/DC			948YY3D
					48 AC/DC			948YY3J
					115 AC/DC			948YY3X
					230 AC			948YY3Z

Electro-optical characteristics Ta = 25°C

Flashing versions available in any colour and voltage.
Please put a «F» for Flashing at the end of part-number.

Blinkende Ausführung erhältlich in allen Farben und Spannungen.
Bitte ergänzen Sie ein «F»am Ende der Artikelnummer.

Version clignotante sur tout les modèles dans l'ensemble des couleurs et des tensions.
Ajouter la lettre «F» à la référence.

For example:				
	Green	230VAC	flashing (blinking)	**948GG3ZF**
	Red	24VAC/DC	flashing (blinking)	**948RR0DF**

Specifications
- Easy installation 16 mm dia mounting hole
- LED indicators light, 5 different colours (2 LED's per indicator)
- Sunlightvisibility with superbright LED's
- All versions also available as flashing units
- 12 V–230 V AF/DC operation, no polarity problems other V/mA combinations on request
- Shock- and vibrationsresistant
- Long life-time, > 50 000 hours
- Energy saving, consumption only 20 mA

Merkmale
- Einfacher Einbau in 16 mm Montageloch
- LED Signalleuchten, 5 verschiedene Farben (2 LED's pro Leuchte)
- Sonnenlichtsichtbarkeit mit superhellen LED's
- Alle Versionen blinkend erhältlich
- 12 V–230 V AC/DC-Betrieb, keine Polaritätsprobleme weitere V/mA-Ausführungen auf Anfrage
- Schock- und vibrationsfest
- Lange Lebensdauer, > 50 000 Stunden
- Energiesparend, nur 20 mA Stromaufnahme

Benefits
- Diamètre du trou de montage 16 mm
- Indicateur LED, 5 différentes couleurs (2 LED's par indicateur)
- Visibilité plein soleil avec LED's haute luminosité
- Version clignotante possible sur tous les modèles
- Fonctionnement en 12 V–230 V AC et DC Autres combinaisons V/mA sur demande
- Résistant aux chocs et vibrations
- Très longue durée de vie, > 50 000 heures
- Economie d'énergie consommation seulement 20 mA

– Spezial executions on request

– Spezialanfertigungen auf Anfrage

– Executions speciales sur demande

«Jumbo» indicator
waterproof IP65

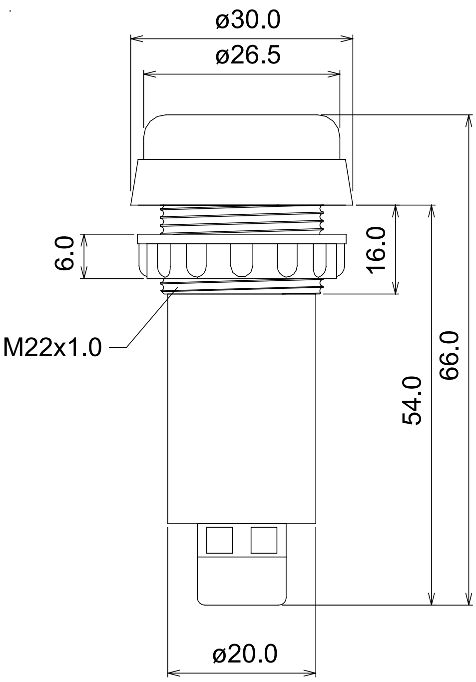
«Jumbo» Leuchte
wasserdicht IP65

Lampe «Jumbo»
étanche IP65

951



Package dimensions
All dimensions are in millimeters



Material:
Lens: Polycarbonat (LEXAN)
Body: Thermoplast ABS meet UL94V-0/1,6

Emitted colour	Electro-optical characteristics Ta = 25°C: Peak Wave-length λp	Operat. Temp.	Stor. Temp.	Luminous intensity I_V Typ.	Forward voltage V_F Typ.	I_F	Viewing angle	Type Typ Type
	nm	°C	°C	mcd	V	mA	°	
Blue Blau Bleu	470			4 LED's à 4800 mcd	12 AC/DC	20	60	951BB3B
					24 AC/DC			951BB3D
					48 AC/DC			951BB3J
					115 AC/DC			951BB3X
					230 AC			951BB3Z
Green Grün Vert	565			4 LED's à 800 mcd	12 AC/DC			951GG0B
					24 AC/DC	20	60	951GG0D
					48 AC/DC			951GG0J
					115 AC/DC			951GG0X
					230 AC			951GG0Z
	525			super-bright 4 LED's à 16000 mcd	12 AC/DC			951GG3B
					24 AC/DC			951GG3D
					48 AC/DC			951GG3J
					115 AC/DC			951GG3X
					230 AC			951GG3Z
Red Rot Rouge	660			4 LED's à 3000 mcd	12 AC/DC			951RR0B
					24 AC/DC			951RR0D
		- 30 + 80	- 40 + 100		48 AC/DC	20	60	951RR0J
					115 AC/DC			951RR0X
					230 AC/DC			951RR0Z
White Weiss Blanc	x = 0.31 y = 0.32			super-bright 4 LED's à 9200 mcd	12 AC/DC			951WW3B
					24 AC/DC			951WW3D
					48 AC/DC			951WW3J
					115 AC/DC	20	60	951WW3X
					230 AC			951WW3Z
Yellow Gelb Jaune	585			4 LED's à 250 mcd	12 AC/DC			951YY0B
					24 AC/DC			951YY0D
					48 AC/DC			951YY0J
					115 AC/DC			951YY0X
					230 AC/DC	20	60	951YY0Z
	590			super-bright 4 LED's à 8700 mcd	12 AC/DC			951YY3B
					24 AC/DC			951YY3D
					48 AC/DC			951YY3J
					115 AC/DC			951YY3X
					230 AC			951YY3Z

Flashing versions available in any colour and voltage.
Please put a «F» for Flashing at the end of part-number.

Blinkende Ausführung erhältlich in allen Farben und Spannungen.
Bitte ergänzen Sie ein «F»am Ende der Artikelnummer.

Version clignotante sur tout les modèles dans l'ensemble des couleurs et des tensions.
Ajouter la lettre «F» à la référence.

For example:				
	Green	230VAC	flashing (blinking)	**951GG3ZF**
	Red	24VAC/DC	flashing (blinking)	**951RR0DF**

Specifications
- Easy installation 22 mm dia mounting hole
- LED indicators light, 5 different colours (4 LED's per indicator)
- Sunlightvisibility with superbright LED's
- All versions also available as flashing units
- 12 V–230 V AF/DC operation, no polarity problems other V/mA combinations on request
- Shock- and vibrationsresistant
- Long life-time, > 50 000 hours
- Energy saving, consumption only 20 mA

Merkmale
- Einfacher Einbau in 22 mm Montageloch
- LED Signalleuchten, 5 verschiedene Farben (4 LED's pro Leuchte)
- Sonnenlichtsichtbarkeit mit superhellen LED's
- Alle Versionen blinkend erhältlich
- 12 V–230 V AC/DC-Betrieb, keine Polaritätsprobleme weitere V/mA-Ausführungen auf Anfrage
- Schock- und vibrationsfest
- Lange Lebensdauer, > 50 000 Stunden
- Energiesparend, nur 20 mA Stromaufnahme

Benefits
- Diamètre du trou de montage 22 mm
- Indicateur LED, 5 différentes couleurs (4 LED's par indicateur)
- Visibilité plein soleil avec LED's haute luminosité
- Version clignotante possible sur tous les modèles
- Fonctionnement en 12 V–230 V AC et DC Autres combinaisons V/mA sur demande
- Résistant aux chocs et vibrations
- Très longue durée de vie, > 50 000 heures
- Economie d'énergie consommation seulement 20 mA

– Spezial executions on request

– Spezialanfertigungen auf Anfrage

– Executions speciales sur demande

SLOAN PRECISION OPTOELECTRONICS

Indicator lights

Rotation-proof, LED not exchangeable,
Option: **waterproof**

Signalleuchten

Verdrehsicher, LED nicht auswechselbar,
Option: **wasserdicht**

Voyant lumineux

Anti-rotation, LED non remplaçable,
Option: **étanche**

174 177 178



Réserve de modifications de toutes les données techniques

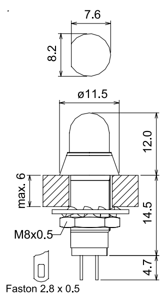
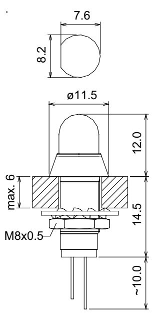
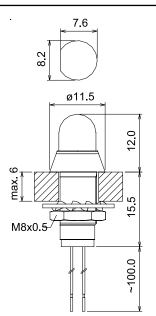
Änderungen die dem technischen Fortschritt dienen, sind vorbehalten

Specifications are subject to change without notice

Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

Type / Typ / Type

Terminals / Anschlüsse / Raccords

Type	Terminals
174	
177	 LED terminals / LED-Anschlüsse / Fils des LED
178	 **Stranded wire** **100 mm** Other lengths on request / Andere Längen auf Anfrage / Autres longueurs sur demande

Body / Körper / Corps

Types 174, 177:

Surface / Oberfläche / Surface		Protection / Schutzart / Protection	
B	blackened / geschwärzt / noircie	**0**	Not waterproof / Nicht wasserdicht / Non étanche
S	Bright nickel plated / Glanz vernickelt / Nickelée brillante	**4**	IP 64 max.
		7	IP 67
		8	IP 68

Type 178 — Rotation-proof / Verdrehschutz / Anti-rotation:

Code	
1	blackened / geschwärzt / noircie; Stranded wire / Litze / Fil multi-brins
2	Bright nickel plated / Glanz vernickelt / Nickelée brillante; Stranded wire / Litze / Fil multi-brins

Accessories / Zubehör / Accessoires

Code	
1	(ring)

Cap / Farbkappe / Cabochon

Style / Form / Forme	
1	(flat cap)
6	(dome cap)

with/mit/avec FRESNEL	Colour / Farbe / Couleurs
A1	Amber / Orange / Orange
B1	Blue / Blau / Bleu
C1	Clear / Klar / Clair
G1	Green / Grün / Vert
R1	Red / Rot / Rouge
W3	White / Weiss / Blanc

Light source / Lichtquelle / Source lum.

LED 5 mm

Code	Intensity	Colour
Y54U	7000 mcd	Yellow / Gelb / Jaune
Y52U	3000 mcd	
Y50U	2000 mcd	
B91G	6700 mcd	Blue / Blau / Bleu
B21G	2120 mcd	
B61G	800 mcd	
G81N	16000 mcd	Green / Grün / Vert
G61N	7200 mcd	
G71N	2760 mcd	
R54U	7000 mcd	Red / Rot / Rouge
R52U	4000 mcd	
R50U	3000 mcd	
W54N	18500 mcd	White / Weiss / Blanc
W52N	2500 mcd	
W50N	690 mcd	

see data-sheet Page 27 / siehe Datenblatt Seite 27 / voir feuille technique sur la page 27

Resistor / Widerstand / Résistance

Code	V	mA
0	without / ohne / sans	
A	5	20
B	12	20
D	24	20
E	28	20

Order-code / Bestell-code / Code de commande

1	7				1				

Indicator lights
for LED
replaceable from the front

Signalleuchten
für LED
von vorne auswechselbar

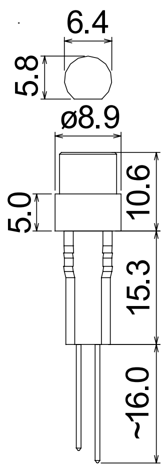
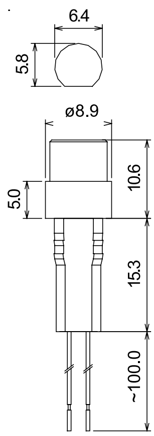
Voyants lumineux
pour LED
remplacement frontal

175 

179 

Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

Type / Typ / Type (Terminals / Anschlüsse / Raccords)

Type	Drawing
175	
179	 **100 mm** Other lengths on request Andere Längen auf Anfrage Autres longueurs sur demande

Body / Körper / Corps

Protection / Schutzart / Protection	
D	Body rotation-proof Körper mit Verdreh-schutz Corps anti-rotation

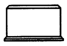
Terminals / Anschlüsse / Raccords (175)	
3	LED terminals LED-Anschl. Fils des LED
6	WW posts WW Pfosten Poteaux WW

Terminals / Anschlüsse / Raccords (179)	
1	Stranded wire Litze Fil multi-brins

Accessories / Zubehör / Accessoires

Code	
1	
2	

Cap / Farbkappe / Cabochon

Style / Form / Forme	
1	
6	

with/mit/avec FRESNEL	Colour / Farbe / Couleurs
A1	Amber / Orange / Orange
B1	Blue / Blau / Bleu
C1	Clear / Klar / Clair
G1	Green / Grün / Vert
R1	Red / Rot / Rouge
W3	White / Weiss / Blanc

Light source / Lichtquelle / Source lum. (LED 5 mm)

Code	Intensity	Colour
Y54U	7000 mcd	Yellow / Gelb / Jaune
Y52U	3000 mcd	
Y50U	2000 mcd	
B91G	6700 mcd	Blue / Blau / Bleu
B21G	2120 mcd	
B61G	800 mcd	
G81N	16000 mcd	Green / Grün / Vert
G61N	7200 mcd	
G71N	2760 mcd	
R54U	7000 mcd	Red / Rot / Rouge
R52U	4000 mcd	
R50U	3000 mcd	
W54N	18500 mcd	White / Weiss / Blanc
W52N	2500 mcd	
W50N	690 mcd	

see data-sheet Page 27
siehe Datenblatt Seite 27
voir feuille technique sur la page 27

Resistor / Widerstand / Résistance

Code	V	mA
0	without / ohne / sans	
A	5	20
B	12	20
D	24	20
E	28	20

Specifications are subject to change without notice
Änderungen die dem technischen Fortschritt dienen, sind vorbehalten
Réserve de modifications de toutes les données techniques

1	7		D						

SLOAN
PRECISION OPTOELECTRONICS

Waterproof indicator light
Rotation-proof
LED not exchangeable

Wasserdichte Signalleuchte
Verdrehsicher
LED nicht auswechselbar

Voyant lumineux étanche
Anti-rotation
LED non remplaçable

117 **119**

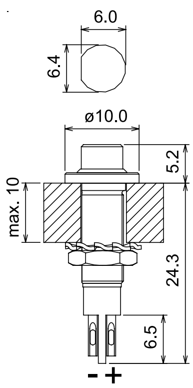


Specifications are subject to change without notice / Änderungen die dem technischen Fortschritt dienen, sind vorbehalten / Réserve de modifications de toutes les données techniques

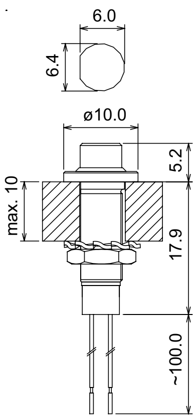
Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

Type / Typ / Type
Terminals / Anschlüsse / Raccords

117



119



Stranded
100 mm
Other lengths on request
Andere Längen auf Anfrage
Autres longueurs sur demande

Body / Körper / Corps

Type 117

Protection / Schutzart / Protection		Surface / Oberfläche / Surface	
4	IP 64	B	blackened / geschwärzt / Noircie
7	IP 67	S	Bright nickel plated / Glanz vernickelt / Nickelée brillante
8	IP 68	A	Short body / Kurzer Körper / Corps court -6 mm; blackened / geschwärzt / Noircie
M	IP 68 military Version	R	Bright nickel plated / Glanz vernickelt / Nickelée brillante
		0	olive drab

Type 119

Protection / Schutzart / Protection		Surface / Oberfläche / Surface	
4	IP 64	1	blackened / geschwärzt / Noircie; Stranded wire / Litze / Fil multi-brins
7	IP 67	2	Bright nickel plated / Glanz vernickelt / Nickelée brillante; Stranded wire / Litze / Fil multi-brins

Accessories / Zubehör / Accessoires

Code	
1	(washer)

Lens / Linse / Lentille

Style / Form / Forme		with/mit/avec FRESNEL	Colour / Farbe / Couleurs
1	(flat)	A1	Amber / Orange / Orange
6	(dome)	B1	Blue / Blau / Bleu
		C1	Clear / Klar / Clair
		G1	Green / Grün / Vert
		R1	Red / Rot / Rouge
		W3	White / Weiss / Blanc

Light source / Lichtquelle / Source lum.
LED 3 mm

Code	Intensity	Colour
Y33U	3200 mcd	Yellow / Gelb / Jaune
Y32U	2200 mcd	Yellow / Gelb / Jaune
Y30U	1200 mcd	Yellow / Gelb / Jaune
B71G	3200 mcd	Blue / Blau / Bleu
B41G	1160 mcd	Blue / Blau / Bleu
B51G	700 mcd	Blue / Blau / Bleu
G41N	11000 mcd	Green / Grün / Vert
G51N	5500 mcd	Green / Grün / Vert
G31N	3220 mcd	Green / Grün / Vert
R33U	3200 mcd	Red / Rot / Rouge
R32U	1600 mcd	Red / Rot / Rouge
R30U	1000 mcd	Red / Rot / Rouge
W33N	4600 mcd	White / Weiss / Blanc
W35N	3100 mcd	White / Weiss / Blanc
W30N	1100 mcd	White / Weiss / Blanc

see data-sheet Page 28
siehe Datenblatt Seite 28
voir feuille technique sur la page 28

Resistor / Widerstand / Résistance

Code	V	mA
0	without / ohne / sans	
A	5	20
B	12	20
D	24	20
E	28	20

Order code: | 1 | 9 | | | | 1 | | | | |

Indicator lights
LED
not exchangeable

Signalleuchten
LED
nicht auswechselbar

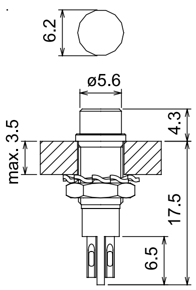
Voyants lumineux
LED
non remplaçable

114	108
	

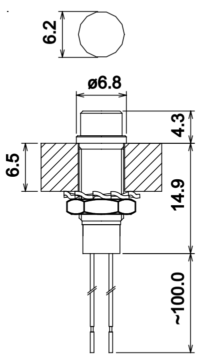
Further specifications and options see page 24–26 / Weitere Spezifikationen und Optionen auf Seite 24–26 / Autres spécifications et options à la page 24–26

Type / Typ / Type
Terminals / Anschlüsse / Raccords

114



108



Standard
100 mm
Other lengths on request
Andere Längen auf Anfrage
Autres longueurs sur demande

Body / Körper / Corps

Surface / Oberfläche / Surface		Nature / Beschaffenheit / Nature	
B	Blackened / geschwärzt / Noircie	0	
S	Bright nickel plated / Glanzvernickelt / Nickelée brillante	L	Type 114 Long body / Langer Körper / Corps long +54 mm

Terminals / Anschlüsse / Raccords	
1	Stranded wire / Litze / Fil multi-brins

Accessories / Zubehör / Accessoires

Code	
1	(lock washer)

Cap / Farbkappe / Cabochon

Style / Form / Forme	
1	(flat)
6	(domed)

with/mit/avec FRESNEL	Colour / Farbe / Couleurs
A1	Amber / Orange / Orange
B1	Blue / Blau / Bleu
C1	Clear / Klar / Clair
G1	Green / Grün / Vert
R1	Red / Rot / Rouge
W3	White / Weiss / Blanc

Light source / Lichtquelle / Source lum.
LED 3 mm

Code	Luminous intensity	Colour
Y33U	3200 mcd	Yellow / Gelb / Jaune
Y32U	2200 mcd	
Y30U	1200 mcd	
B71G	3200 mcd	Blue / Blau / Bleu
B41G	1160 mcd	
B51G	700 mcd	
G41N	11000 mcd	Green / Grün / Vert
G51N	5500 mcd	
G31N	3220 mcd	
R33U	3200 mcd	Red / Rot / Rouge
R32U	1600 mcd	
R30U	1000 mcd	
W33N	4600 mcd	White / Weiss / Blanc
W35N	3100 mcd	
W30N	1100 mcd	

see data-sheet Page 28
siehe Datenblatt Seite 28
voir feuille technique
sur la page 28

Resistor / Widerstand / Résistance

Code	V	mA
0	without / ohne / sans	
A	5	20
B	12	20
D	24	20
E	28	20

Specifications are subject to change without notice
Änderungen die dem technischen Fortschritt dienen, sind vorbehalten
Réserve de modifications de toutes les données techniques

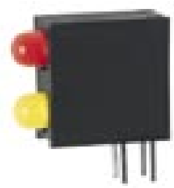
1					1				

Indicator lights for p.c. boards
Holder for single or in-line mounting,
standard grid 2,54 mm.
LED not exchangeable.



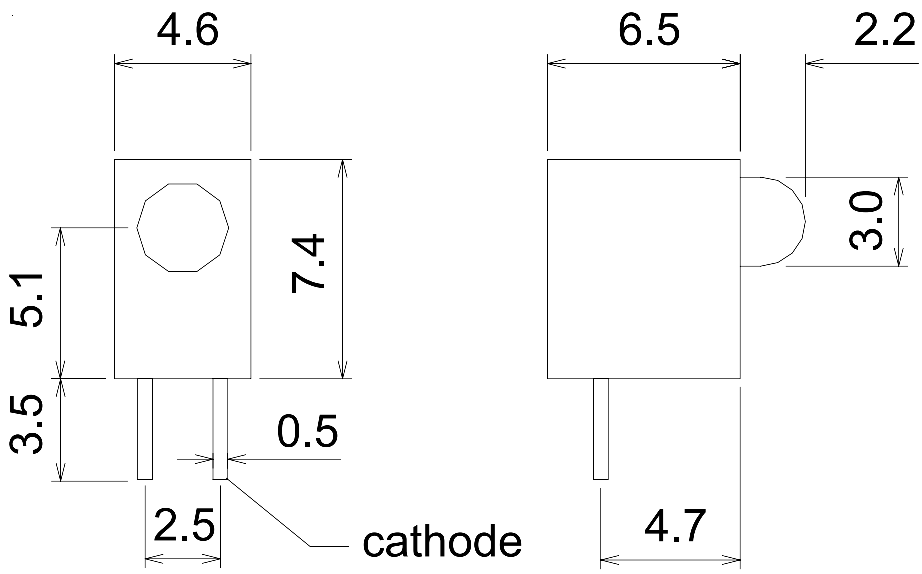
Signalleuchten für Leiterplatten
Fassung für Einzel- oder Reihenmontage,
Raster 2,54 mm.
LED nicht auswechselbar

Voyants lumineux pour circuits imprimés
Supports avec possibilités de montage simple
ou encastré en ligne, pas 2,54 mm.
LED non remplaçable.



LED Characteristics

SLOAN part no. 1 LED	SLOAN part no. 2 LED's	Chip: Emitted Color	Chip: Peak wave length (nm) λp	Lens appearance	Absolut Maximum Ratings: Δλ (nm)	PD (mW)	IF (mA)	Peak If (mA)	Electro-optical Data: VF (V) Typ.	VF (V) Max.	IV Typ (mcd)	Test cond. If (mA)	Viewing Angle (deg) 2 Θ 1/2
C71Y2210	C71YY2210	yellow	585	yellow diffused	35	100	30	150	2.1	2.6	60	20	50
C71R2210	C71RR2210	red	635	red diffused	45	100	30	150	2.0	2.6	40	20	50
C71A2210	C71AA2210	superorange	610	orange diffused	35	100	30	150	2.0	2.6	70	20	50
C71G2210	C71GG2210	supergreen	568	green diffused	30	100	30	150	2.2	2.6	70	20	50
C71R2110	C71RR2110	superred	700	waterclear	90	50	15	50	2.2	2.6	60	10	25
C71R21B0	C71RR21B0	red	635	waterclear	45	100	30	150	2.0	2.6	100	20	25



SLOAN
PRECISION OPTOELECTRONICS

Spezifications Lampholder

Spezifikationen Fassungen

Spécifications voyants

Spezifications | **Spezifikationen** | **Spécifications**

343, 344, 348

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Caps	- PC	Käppchen	- PC	Cabochons	- PC
Terminals	- Type 343: LED	Anschlüsse	- Typ 343: LED	Raccords	- Type 343: LED
	- Type 344: Faston connectors 2.8 x 0.5 tin plated brass		- Typ 344: Faston Steck-Verbindung 2.8 x 0.5 Messing verzinnt		- Type 344: Connecteurs Faston 2.8 x 0.5 laiton étamé
	- Type 348: Stranded wire		- Typ 348: Litzen		- Type 348: Fil multi-brins
Insulating body	- PA or PPS	Isolierkörper	- PA oder PPS	Corps d'isol.	- PA ou PPS
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

193, 194, 198

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Caps	- PC	Käppchen	- PC	Cabochons	- PC
Terminals	- Type 193: LED	Anschlüsse	- Typ 193: LED	Raccords	- Type 193: LED
	- Type 194: Sold. lugs, tin plated Ms		- Typ 194: Lötösen, Ms verzinnt		- Type 194: à souder, Ms étamé
	- Type 198: Stranded wire		- Typ 198: Litzen		- Type 198: Fil multi-brins
Insulating body	- Type 193: PA	Isolierkörper	- Typ 193: PA	Corps d'isol.	- Type 193: PA
	- Type 194-198: PPS		- Typen 194-198: PPS		- Type 194-198: PPS
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

962, 963

- LED Technology	- zuverlässige LED-Technologie	- Techniquer LED à haute fiabilité
- Long service life (half-life 50'000 hours)	- Lange Lebensdauer (Halbwertzeit von 50'000 Betriebsstunden)	- Durée de vie élevée (demi-vie 50'000 heures)
- Vandal proof	- vandalensicher	- résistante aux vandales
- Ambient Temerature -40°C to +85°C	- Umgebungstemperatur -40°C bis +85°C	- Température ambiante -40°C to +85°C

200

Body	- Type 200: Polycarbonate	Körper	- Typ 200: Polycarbonat	Corps	- Type 200: Polycarbonate
Terminals	- Insulated stranded wire with LED: +red, -black	Anschlüsse	- Isolierte Litze: bei LED: +rot, -schwarz	Raccords	- Fils multi-brins isolés avec LED: +rouge, -noir

333, 334, 338

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Terminals	- Type 333: LED	Anschlüsse	- Typ 333: LED	Raccords	- Type 333: LED
	- Type 334: Faston connectors 2.8 x 0.5 tin plated brass		- Typ 334: Faston Steck-Verbindung 2.8 x 0.5 Messing verzinnt		- Type 334: Connecteurs Faston 2.8 x 0.5 laiton étamé
	- Type 338: Stranded wire		- Typ 338: Litzen		- Type 338: Fil multi-brins
Insulating body	- PA or PPS	Isolierkörper	- PA oder PPS	Corps d'isol.	- PA ou PPS
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

13C, 14C

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Terminals	- LED terminals	Anschlüsse	- LED-Anschlüsse	Raccords	- Fils des LED
Insulating body	- Polyamid	Isolierkörper	- Polyamid	Corps d'isol.	- Polyamide

Spezifications Lampholder

Spezifikationen Fassungen

Spécifications voyants

Réserve de modifications de toutes les données techniques
Änderungen die dem technischen Fortschritt dienen, sind vorbehalten
Specifications are subject to change without notice

Spezifications		Spezifikationen		Spécifications	

134, 135, 138

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Terminals	- Type 134: Solder lugs, tin plated brass - Type 135: LED - Type 138: Stranded wire	Anschlüsse	- Typ 134: Lötösen, Messing verzinnt - Typ 135: LED - Typ 138: Litzen	Raccords	- Type 134: contacts à souder - Type 135: LED - Type 138: Fil multi-brins
Insulating body	- Type 134: PPS	Isolierkörper	- Typ 134: PPS	Corps d'isol.	- Type 134: PPS
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

133 R, 134 R, 138 R

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Terminals	- Type 133R: LED, resp. LED/resistor wire - Type 134R: Solder lugs, tin plated - Type 138R: Stranded wire	Anschlüsse	- Typ 133R: LED, resp. LED/Widerstands-Draht - Typ 134R: Lötösen, verzinnt - Typ 138R: Litzen	Raccords	- Type 133R: LED, resp. LED/fil de la résist. - Type 134R: contacts à souder, étamé - Type 138R: Fil multi-brins
Insulating body	- Types 133R-138R: PPS	Isolierkörper	- Typen 133R-138R: PPS	Corps d'isol.	- Type 133R-138R: PPS
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

353, 354, 358

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Terminals	- Type 353: LED - Type 354: Faston connectors 2.8 x 0.5 tin plated brass - Type 358: Stranded wire	Anschlüsse	- Typ 353: LED - Typ 354: Faston Steck-Verbindung 2.8 x 0.5 Messing verzinnt - Typ 358: Litzen	Raccords	- Type 353: LED - Type 354: Connecteurs Faston 2.8 x 0.5 laiton étamé - Type 358: Fil multi-brins
Insulating body	- PA or PPS	Isolierkörper	- PA oder PPS	Corps d'isol.	- PA ou PPS
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

144, 145, 148

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Terminals	- Type 144: Solder lugs, tin plated brass - Type 145: LED - Type 148: Stranded wire	Anschlüsse	- Typ 144: Lötösen, Messing verzinnt - Typ 145: LED - Typ 148: Litzen	Raccords	- Type 144: contacts à souder - Type 145: LED - Type 148: Fil multi-brins
Insulating body	- Type 144: PPS - Type 145: PA	Isolierkörper	- Typ 144: PPS - Typ 145: PA	Corps d'isol.	- Type 144: PPS - Type 145: PA
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

153, 154, 158

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Terminals	- Type 153: LED - Type 154: Sold. lugs, tin plated Ms - Type 158: Stranded wire	Anschlüsse	- Typ 153: LED - Typ 154: Lötösen, Ms verzinnt - Typ 158: Litzen	Raccords	- Type 153: LED - Type 154: à souder, Ms étamé - Type 158: Fil multi-brins
Insulating body	- Type 153: PA - Types 154-158: PPS:	Isolierkörper	- Typ 153: PA - Typen 154-158: PPS	Corps d'isol.	- Type 153: PA - Types 154-158: PPS
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

177, 174, 178

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Caps	- PC	Käppchen	- PC	Cabochons	- PC
Terminals	- Type 174: Faston connectors 2.8 x 0.5 tin plated brass - Type 177: LED - Type 178: Stranded wire	Anschlüsse	- Typ 174: Faston Steck-Verbindung 2.8 x 0.5 Messing verzinnt - Typ 177: LED - Typ 178: Litzen	Raccords	- Type 174: Connecteurs Faston 2.8 x 0.5 laiton étamé - Type 177: LED - Type 178: Fil multi-brins
Insulating body	- PA or PPS	Isolierkörper	- PA oder PPS	Corps d'isol.	- PA ou PPS
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

Spezifications Lampholder

Spezifikationen Fassungen

Spécifications voyants

Spezifications	Spezifikationen	Spécifications

175, 179

Body	- PA, black	Körper	- PA, schwarz	Corps	- Laiton nickelé brillant ou noirci
Caps	- PC	Käppchen	- PC	Cabochons	- PC
Terminals	- Type 175: LED or WW posts, tin plated brass	Anschlüsse	- Typ 175: LED oder Wire wrap Pfosten, Messing verzinnt	Raccords	- Type 175: LED ou poteaux WW, laiton étamé
	- Type 179: Stranded wire		- Typ 179: Litzen		- Type 179: Fil multi-brins
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

117, 119

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Caps	- PC	Käppchen	- PC	Cabochons	- PC
Terminals	- Type 117: Solder lugs, tin plated brass	Anschlüsse	- Typ 117: Lötösen, Messing verzinnt	Raccords	- Type 117: contacts à souder, Ms revétm.
	- Type 119: Stranded wire		- Typ 119: Litzen	étamé	- Type 108: Fil multi-brins
Insulating body	- PPS	Isolierkörper	- PPS	Corps d'isol.	- PPS
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

114, 108

Body	- Bright nickel plated or blackened brass	Körper	- Messing glanzvernickelt oder geschwärzt	Corps	- Laiton nickelé brillant ou noirci
Caps	- PC	Käppchen	- PC	Cabochons	- PC
Terminals	- Type 114: Solder lugs	Anschlüsse	- Typ 114: Lötösen	Raccords	- Type 114: contacts à souder
	- Type 108: Stranded wire		- Typ 108: Litzen		- Type 108: Fil multi-brins
Insulating body	- Type 114, 108: PPS	Isolierkörper	- Typ 114, 108: PPS	Corps d'isol.	- Types 114, 108: PPS
Soldering	- 3 s max. at 260° max	Lötdauer	- Max. 3 s bei max. 260°	Soudage	- 3 s max. à 260° max

Protection degrees: IP 64 / IP 67 / IP 68 / M | Schutzgrad: IP 64 / IP 67 / IP 68 / M | Protection: IP 64 / IP 67 / IP 68 / M

4 IP 64

Protection argainst splashwater from the front | Schutz gegen Spritzwasser von vorne | Protection contre les éclaboussures d'eau frontales

7 IP 67

Suitable for continuous submersion in water / without pressure | Geeignet zum dauernden Untertauchen in Wasser / ohne Druck | Appropriée pour usage permanent dans l'eau / sans pression

8 IP 68

under pressure 1 bar | unter Druck 1 bar | sous pression 1 bar

M IP 68

Military execution (on request) | Militär-Ausführung (auf Anfrage) | Exécution militaire (sur demande)

Remarks

All specifications according to information from our manufacturers, without additional guarantee on our part.

Specifications are subject to change without notice.

Bemerkungen

Alle Spezifikationen basieren auf Angaben unserer Lieferanten, ohne zusätzliche Garantie unsererseits.

Änderungen, die dem technischen Fortschritt dienen, sind vorbehalten.

Notes

Toutes les spècifications selon indications de nos fabricants, sans garantie supplèmentaire de notre part.

Rèserve de modifications pour toutes les données téchniques.

SLOAN AG | Birmannsgasse 8 | CH-4009 Basel | Tel. +41 (0)61 264 10 60 | Fax +41 (0)61 264 10 75 | sloan@sloan-basel.com | www.sloan.ch

Specifications LED's

ATTENTION
Observe Precautions for Handling
Electrostatic Sensitive Devices




5mm LED's

Yellow LED's



Electro-Optical-Characteristics Ta=25C°, IF=20mA

Part No:	Peak Wavelenght [nm]	Luminous Intensity [mcd] min.	typ.	max.	Viewing angle 2Θ1/2	Forward Voltage VF[V] min.	max.	Lens Colour
Y54U	592	3500	7000	9800	12°	2.25	2.60	waterclear
Y52U	592	1200	3000	4200	30°	2.00	2.50	waterclear
Y50U	592	1000	2000	2800	45°	2.25	2.60	waterclear

Blue LED's



Electro-Optical-Characteristics Ta=25C°, IF=20mA

Part No:	Peak Wavelenght [nm]	Luminous Intensity [mcd] min.	typ.	max.	Viewing angle 2Θ1/2	Forward Voltage VF[V] min.	max.	Lens Colour
B91G	470	5760	6700	7400	15°	3.6	4.0	waterclear
B21G	470	1780	2120	2520	30°	3.6	4.0	waterclear
B61G	470	690	800	960	45°	3.6	4.0	waterclear

Green LED's



Electro-Optical-Characteristics Ta=25C°, IF=20mA

Part No:	Peak Wavelenght [nm]	Luminous Intensity [mcd] min.	typ.	max.	Viewing angle 2Θ1/2	Forward Voltage VF[V] min.	max.	Lens Colour
G81N	525	13800	16000	19500	15°	3.6	4.0	waterclear
G61N	525	6000	7200	8400	30°	3.6	4.0	waterclear
G71N	525	2300	2760	3320	45°	3.6	4.0	waterclear

Red LED's



Electro-Optical-Characteristics Ta=25C°, IF=20mA

Part No:	Peak Wavelenght [nm]	Luminous Intensity [mcd] min.	typ.	max.	Viewing angle 2Θ1/2	Forward Voltage VF[V] min.	max.	Lens Colour
R54U	638	3500	7000	9800	12°	2.25	2.60	waterclear
R52U	638	2000	4000	5600	30°	2.25	2.60	waterclear
R50U	638	1500	3000	4200	40°	2.25	2.60	waterclear

White LED's



Electro-Optical-Characteristics Ta=25C°, IF=20mA

Part No:	Colour Temperature [°K]	Luminous Intensity [mcd] min.	typ.	max.	Viewing angle 2Θ1/2	Forward Voltage VF[V] min.	max.	Lens Colour
W54N	5500-9000	15500	18500	22000	15°	3.6	4.0	waterclear
W52N	5500-9000	2060	2500	3000	50°	3.6	4.0	waterclear
W50N	5500-9000	580	690	805	70°	3.6	4.0	milky

1. All dimensions are in millimeters.
2. Tolerance is ± 0.25mm unless otherwise specified.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

Storage Temp. –40~ +100 °C   Operating Temp. –30~ +80 °C

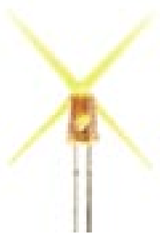
Specifications LED's

ATTENTION
Observe Precautions for Handling
Electrostatic Sensitive Devices




3mm LED's

Yellow LED's



Part No:	Peak Wavelenght [nm]	Luminous Intensity [mcd] min.	typ.	max.	Viewing angle 2Θ1/2	Forward Voltage VF[V] min.	max.	Lens Colour
	Electro-Optical-Characteristics Ta=25C°, IF=20mA							
Y33U	592	1600	3200	4480	14°	2.25	2.50	waterclear
Y32U	592	1100	2200	3080	35°	2.25	2.50	waterclear
Y30U	592	600	1200	1680	40°	2.00	2.50	waterclear

Blue LED's



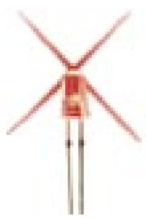
Part No:	Peak Wavelenght [nm]	Luminous Intensity [mcd] min.	typ.	max.	Viewing angle 2Θ1/2	Forward Voltage VF[V] min.	max.	Lens Colour
	Electro-Optical-Characteristics Ta=25C°, IF=20mA							
B71G	470	2760	3200	3880	15°	3.6	4.0	waterclear
B41G	470	960	1160	1380	30°	3.6	4.0	waterclear
B51G	470	580	700	820	45°	3.6	4.0	waterclear

Green LED's



Part No:	Peak Wavelenght [nm]	Luminous Intensity [mcd] min.	typ.	max.	Viewing angle 2Θ1/2	Forward Voltage VF[V] min.	max.	Lens Colour
	Electro-Optical-Characteristics Ta=25C°, IF=20mA							
G41N	525	9200	11000	13200	15°	3.6	4.0	waterclear
G51N	525	4600	5500	6600	30°	3.6	4.0	waterclear
G31N	525	2760	3220	3920	45°	3.6	4.0	waterclear

Red LED's



Part No:	Peak Wavelenght [nm]	Luminous Intensity [mcd] min.	typ.	max.	Viewing angle 2Θ1/2	Forward Voltage VF[V] min.	max.	Lens Colour
	Electro-Optical-Characteristics Ta=25C°, IF=20mA							
R33U	638	2200	3200	4480	14°	2.25	2.50	waterclear
R32U	635	900	1600	2240	35°	2.00	2.50	waterclear
R30U	635	700	1000	1480	40°	2.00	2.50	waterclear

White LED's



Part No:	Colour Temperature [°K]	Luminous Intensity [mcd] min.	typ.	max.	Viewing angle 2Θ1/2	Forward Voltage VF[V] min.	max.	Lens Colour
	Electro-Optical-Characteristics Ta=25C°, IF=20mA							
W33N	5500-9000	3900	4600	5520	25°	3.6	4.0	waterclear
W35N	5500-9000	2600	3100	3700	35°	3.6	4.0	waterclear
W30N	5500-9000	920	1100	1260	70°	3.6	4.0	milky

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3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

Storage Temp. –40~ +100 °C Operating Temp. –30~ +80 °C

Specifications are subject to change without notice
Änderungen die dem technischen Fortschritt dienen, sind vorbehalten
Réserve de modifications de toutes les données techniques



BA9S-

White based 5mm LED's

Easy replacement of filament bulbs

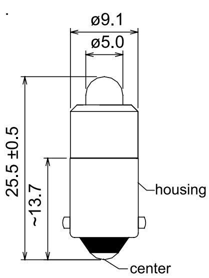
other colours and voltages on request

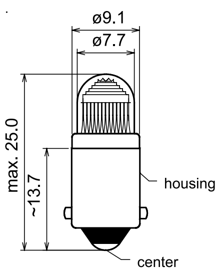


Emitted colour	Electro-otical characteristics Ta = 25°C / 20 mA				Epoxy	Part No. BA9S
	Voltage $U_{[V]}$	Luminous intensity typ. [mcd]	Directivity 20 1/2	CIE		
Without Cap / Ohne Kappe / Sans cabochon						
white	5V	690	70°	0.31/0.32	diffused	BA9S-L5W50NBSA XX
white	5V	2500	50°	0.31/0.32	clear	BA9S-L5W52NBSA XX
white	5V	9200	20°	0.31/0.32	clear	BA9S-L5W54NBSA XX
white	12V	690	70°	0.31/0.32	diffused	BA9S-L5W50NBSB XX
white	12V	2500	50°	0.31/0.32	clear	BA9S-L5W52NBSB XX
white	12V	9200	20°	0.31/0.32	clear	BA9S-L5W54NBSB XX
white	24V	690	70°	0.31/0.32	diffused	BA9S-L5W50NBSD XX
white	24V	2500	50°	0.31/0.32	clear	BA9S-L5W52NBSD XX
white	24V	9200	20°	0.31/0.32	clear	BA9S-L5W54NBSD XX
With Cap / Mit Kappe / Avec cabochon						
white	5V	690	70°	0.31/0.32	diffused	BA9S-C1W50NBSA XX
white	5V	2500	50°	0.31/0.32	clear	BA9S-C1W52NBSA XX
white	5V	9200	20°	0.31/0.32	clear	BA9S-C1W54NBSA XX
white	12V	690	70°	0.31/0.32	diffused	BA9S-C1W50NBSB XX
white	12V	2500	50°	0.31/0.32	clear	BA9S-C1W52NBSB XX
white	12V	9200	20°	0.31/0.32	clear	BA9S-C1W54NBSB XX
white	24V	690	70°	0.31/0.32	diffused	BA9S-C1W50NBSD XX
white	24V	2500	50°	0.31/0.32	clear	BA9S-C1W52NBSD XX
white	24V	9200	20°	0.31/0.32	clear	BA9S-C1W54NBSD XX

01 = anode (+) on centercontact DC (standard)

02 = cathode (-) on centercontact DC





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E10-

White based 5mm LED's

Easy replacement of filament bulbs

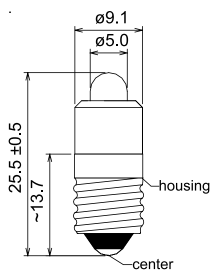
other colours and voltages on request

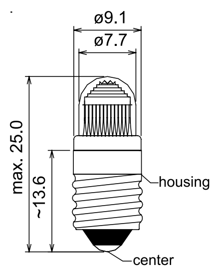


Emitted colour	Electro-otical characteristics Ta = 25°C / 20 mA				Epoxy	Part No. E10
	Voltage $U_{[V]}$	Luminous intensity typ. [mcd]	Directivity 20 ½	CIE		
Without Cap / Ohne Kappe / Sans cabochon						
white	5V	690	70°	0.31/0.32	diffused	E10-L5W50NBSA XX
white	5V	2500	50°	0.31/0.32	clear	E10-L5W52NBSA XX
white	5V	9200	20°	0.31/0.32	clear	E10-L5W54NBSA XX
white	12V	690	70°	0.31/0.32	diffused	E10-L5W50NBSB XX
white	12V	2500	50°	0.31/0.32	clear	E10-L5W52NBSB XX
white	12V	9200	20°	0.31/0.32	clear	E10-L5W54NBSB XX
white	24V	690	70°	0.31/0.32	diffused	E10-L5W50NBSD XX
white	24V	2500	50°	0.31/0.32	clear	E10-L5W52NBSD XX
white	24V	9200	20°	0.31/0.32	clear	E10-L5W54NBSD XX
With Cap / Mit Kappe / Avec cabochon						
white	5V	690	70°	0.31/0.32	diffused	E10-C1W50NBSA XX
white	5V	2500	50°	0.31/0.32	clear	E10-C1W52NBSA XX
white	5V	9200	20°	0.31/0.32	clear	E10-C1W54NBSA XX
white	12V	690	70°	0.31/0.32	diffused	E10-C1W50NBSB XX
white	12V	2500	50°	0.31/0.32	clear	E10-C1W52NBSB XX
white	12V	9200	20°	0.31/0.32	clear	E10-C1W54NBSB XX
white	24V	690	70°	0.31/0.32	diffused	E10-C1W50NBSD XX
white	24V	2500	50°	0.31/0.32	clear	E10-C1W52NBSD XX
white	24V	9200	20°	0.31/0.32	clear	E10-C1W54NBSD XX

01 = anode (+) on centercontact DC (standard)

02 = cathode (-) on centercontact DC





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2. Tolerance is ± 0.25mm unless otherwise specified.
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SLOAN
PRECISION OPTOELECTRONICS

Midget Groove T1 3/4

White based 3mm LED's

Easy replacement of filament bulbs

other colours and voltages on request

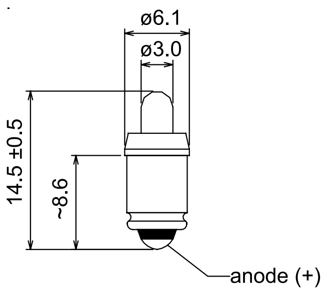


Emitted colour	Electro-otical characteristics Ta = 25°C / 20 mA Voltage $U_{[V]}$	Luminous intensity typ. [mcd]	Directivity 2θ 1/2	CIE	Epoxy	Part No. MG
white	12V	4600	25°	0.31/0.32	clear	MG-W33NBSB01
white	12V	3100	35°	0.31/0.32	clear	MG-W35NBSB01
white	12V	2070	60°	0.31/0.32	clear	MG-W34NBSB01
white	12V	1100	70°	0.31/0.32	diffused	MG-W30NBSB01
white	24V*	4600	25°	0.31/0.32	clear	MG-W33NBSM01
white	24V*	3100	35°	0.31/0.32	clear	MG-W35NBSM01
white	24V*	2070	60°	0.31/0.32	clear	MG-W34NBSM01
white	24V*	1100	70°	0.31/0.32	diffused	MG-W30NBSM01
white	12V	4600	25°	0.31/0.32	clear	MG-W33NBSB02
white	12V	3100	35°	0.31/0.32	clear	MG-W35NBSB02
white	12V	2070	60°	0.31/0.32	clear	MG-W34NBSB02
white	12V	1100	70°	0.31/0.32	diffused	MG-W30NBSB02
white	24V*	4600	25°	0.31/0.32	clear	MG-W33NBSM02
white	24V*	3100	35°	0.31/0.32	clear	MG-W35NBSM02
white	24V*	2070	60°	0.31/0.32	clear	MG-W34NBSM02
white	24V*	1100	70°	0.31/0.32	diffused	MG-W30NBSM02

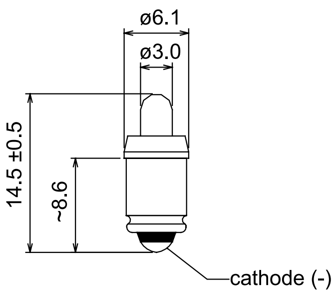
* I_F = 16mA

01 = anode (+) on centercontact DC (standard)

02 = cathode (-) on centercontact DC



01



02

1. All dimensions are in millimeters.
2. Tolerance is +- 0.2mm unless otherwise specified.
3. Specifications are subject to change without notice.

Midget Flange T1 3/4

White based 3mm LED's

Easy replacement of filament bulbs

other colours and voltages on request

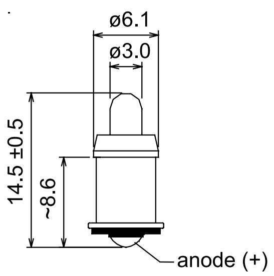


Emitted colour	Electro-otical characteristics Ta = 25°C / 20 mA				Epoxy	Part No. MF
	Voltage $U_{[V]}$	Luminous intensity typ. [mcd]	Directivity 20 1/2	CIE		
white	12V	4600	25°	0.31/0.32	clear	MF-W33NBSB01
white	12V	3100	35°	0.31/0.32	clear	MF-W35NBSB01
white	12V	2070	60°	0.31/0.32	clear	MF-W34NBSB01
white	12V	1100	70°	0.31/0.32	diffused	MF-W30NBSB01
white	24V*	4600	25°	0.31/0.32	clear	MF-W33NBSM01
white	24V*	3100	35°	0.31/0.32	clear	MF-W35NBSM01
white	24V*	2070	60°	0.31/0.32	clear	MF-W34NBSM01
white	24V*	1100	70°	0.31/0.32	diffused	MF-W30NBSM01
white	12V	4600	25°	0.31/0.32	clear	MF-W33NBSB02
white	12V	3100	35°	0.31/0.32	clear	MF-W35NBSB02
white	12V	2070	60°	0.31/0.32	clear	MF-W34NBSB02
white	12V	1100	70°	0.31/0.32	diffused	MF-W30NBSB02
white	24V*	4600	25°	0.31/0.32	clear	MF-W33NBSM02
white	24V*	3100	35°	0.31/0.32	clear	MF-W35NBSM02
white	24V*	2070	60°	0.31/0.32	clear	MF-W34NBSM02
white	24V*	1100	70°	0.31/0.32	diffused	MF-W30NBSM02

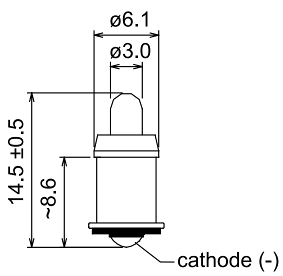
* I_F = 16mA

01 = anode (+) on centercontact DC (standard)

02 = cathode (-) on centercontact DC



01



02

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2. Tolerance is +- 0.2mm unless otherwise specified.
3. Specifications are subject to change without notice.

Wedge Base W2.0 x 4.6d

White based 3mm LED's

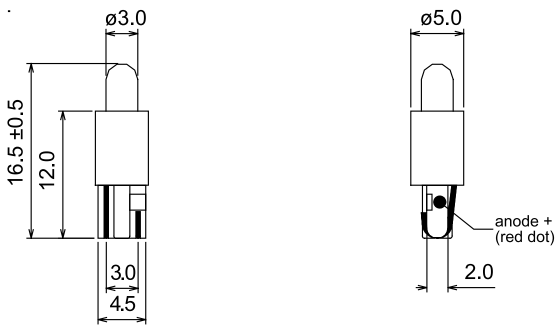
Easy replacement of filament bulbs

other colours and voltages on request



Emitted colour	Electro-otical characteristics Ta = 25°C / 20 mA				Epoxy	Part No. WB
	Voltage $U_{[V]}$	Luminous intensity typ. [mcd]	Directivity 20 1/2	CIE		
white	5V	4600	25°	0.31/0.32	clear	WB4.6-W33NBSA
white	5V	3100	35°	0.31/0.32	clear	WB4.6-W35NBSA
white	5V	2070	60°	0.31/0.32	clear	WB4.6-W34NBSA
white	5V	1100	70°	0.31/0.32	diffused	WB4.6-W30NBSA
white	12V	4600	25°	0.31/0.32	clear	WB4.6-W33NBSB
white	12V	3100	35°	0.31/0.32	clear	WB4.6-W35NBSB
white	12V	2070	60°	0.31/0.32	clear	WB4.6-W34NBSB
white	12V	1100	70°	0.31/0.32	diffused	WB4.6-W30NBSB
white	24V*	4600	25°	0.31/0.32	clear	WB4.6-W33NBSM
white	24V*	3100	35°	0.31/0.32	clear	WB4.6-W35NBSM
white	24V*	2070	60°	0.31/0.32	clear	WB4.6-W34NBSM
white	24V*	1100	70°	0.31/0.32	diffused	WB4.6-W30NBSM

* I_F = 16mA



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2. Tolerance is +- 0.2mm unless otherwise specified.
3. Specifications are subject to change without notice.

Réserve de modifications de toutes les données techniques

Änderungen die dem technischen Fortschritt dienenen, sind vorbehalten

Specifications are subject to change without notice

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T5,5K / T5,5L

White based 3mm LED's

Easy replacement of filament bulbs

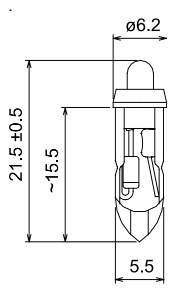
other colours and voltages on request



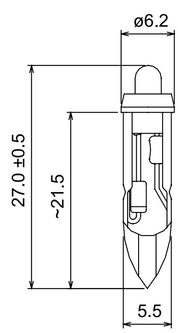
Emitted colour	Electro-otical characteristics Ta = 25°C / 20 mA				Epoxy	Part No. T5,5
	Voltage $U_{[V]}$	Luminous intensity typ. [mcd]	Directivity 20 ½	CIE		
Short Body / kurzer Körper / Corps court						
white	12V	4600	25°	0.31/0.32	clear	T5,5K-W33NBSB03
white	12V	3100	35°	0.31/0.32	clear	T5,5K-W35NBSB03
white	12V	2070	60°	0.31/0.32	clear	T5,5K-W34NBSB03
white	12V	1100	70°	0.31/0.32	diffused	T5,5K-W30NBSB03
white	24V*	4600	25°	0.31/0.32	clear	T5,5K-W33NBSM03
white	24V*	3100	35°	0.31/0.32	clear	T5,5K-W35NBSM03
white	24V*	2070	60°	0.31/0.32	clear	T5,5K-W34NBSM03
white	24V*	1100	70°	0.31/0.32	diffused	T5,5K-W30NBSM03
Long Body / Langer Körper / Corps court						
white	12V	4600	25°	0.31/0.32	clear	T5,5L-W33NBSB03
white	12V	3100	35°	0.31/0.32	clear	T5,5L-W35NBSB03
white	12V	2070	60°	0.31/0.32	clear	T5,5L-W34NBSB03
white	12V	1100	70°	0.31/0.32	diffused	T5,5L-W30NBSB03
white	24V*	4600	25°	0.31/0.32	clear	T5,5L-W33NBSM03
white	24V*	3100	35°	0.31/0.32	clear	T5,5L-W35NBSM03
white	24V*	2070	60°	0.31/0.32	clear	T5,5L-W34NBSM03
white	24V*	1100	70°	0.31/0.32	diffused	T5,5L-W30NBSM03

03 = AC/DC built-in diode for protection

* I_F = 16mA



T5,5K



T5,5L

1. All dimensions are in millimeters.
2. Tolerance is +- 0.2mm unless otherwise specified.
3. Specifications are subject to change without notice.

Major application fields:

Automotive/Special vehicles:
Warning lights, emergency indicators, car immobilizing systems, car factory automation.
Blue LED flashers for Police cars, Diplomacy cars, special forces vehicles.

Consumer electronics:
Microwave ovens, toasters, coffee machines, Irons, refrigerators.

Industrial controls / Traffic controls:
Panel indicators, elevators, photo-processing darkroom lights, traffic control, railway track diagram indicators, power stations.
LED clusters for railway use.

Telecommunication:
PCB line indicators, status indicators, portable communication equipment.

Defence:
Tank/tank missiles, combat aircrafts, mine detectors warning lights, submarine engine control, fire coordination systems for tanks.
28 NATO Numbers.
NATO Manufacturer Code S3643.
French Army „GAM T1" listed.

Aviation:
Commercial and military, cockpit lights, stewardess call systems.

Security:
Safety control panels surveillance, emergency lights.

Medical:
Fault indicators, sealed indicators for sergery equipment, blood analyser, nurse-call systems, dentist equipment.

We strive to be a Total Quality company that anticipates and responds to our customer's needs, continously improving our products and processes.

SLOAN AG was founded 1967 in Basel CH and is a sister of the Sloan Company in California USA.

Sloan AG

Designs, manufactures and distributes electronic and electrooptical components which meet the highest standards for quality, durability and performance. In more than 30 years of service to the military and commercial markets SLOAN has developed the largest range of quality indicators and continues to introduce new, up-to-date products.
A development department, innovative and quickly responding, can realize designs of optoelectronic products according to customers specifications.
SLOAN offers an extensive range of waterproof devices for security equipments. Rugged metalhousings, shock and vibrationproof, ultrabright LED indicators, sunlight visibility, viewing angle of more than 180° with LED's, are further advantages of the SLOAN range with which we satisfy our customers demands.
SLOAN's longstanding experience and innovations is a guarantee to provide customers with superior products, standard or custom designed, at reasonable cost.

SLOAN
PRECISION OPTOELECTRONICS

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